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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,568

04/27/2006

Stuart Ritchie Bradford

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EXAMINER

PARSA, JAFAR F

ART UNIT

PAPER NUMBER

1621

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DELIVERY MODE

03/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,568	<b>Applicant(s)</b> BRADFORD, STUART RITCHIE	
	<b>Examiner</b> Jafar Parsa	<b>Art Unit</b> 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/27/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 and 8-17 rejected under 35 U.S.C. 102(e) as being anticipated by O'Rear (US 2004/0259961 A1).

O'Rear discloses an integrated process for the production and transportation of a hydrocarbonaceous product in a transport vessel containing one or more ballast tanks, one or more cargo tanks, and optionally one or more liquid nitrogen storage tanks. The process comprises obtaining a hydrocarbon asset and separating air into a primarily oxygen containing gas and a primarily nitrogen containing blanketing agent. The primarily oxygen containing gas is reacted with the hydrocarbon asset to form syngas and the syngas is converted into a hydrocarbonaceous product. At least a portion of the hydrocarbonaceous product is transferred into at least one of the cargo tanks and at least a portion of the primarily nitrogen containing blanketing agent is transferred to the transport vessel. At least a portion of the primarily nitrogen containing blanketing agent is used to blanket at least one of the tanks on the vessel. Preferably, the primarily nitrogen containing blanketing agent is used to blanket the cargo tank containing the hydrocarbonaceous product during transportation. Preferably, the process to convert the syngas into a hydrocarbonaceous product is either a Fischer Tropsch process or a methanol synthesis process. See paragraph 0017.

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O'Rear discloses that oxygen containing gas" means a gas containing at least 90 volume % oxygen, preferably at least 95 volume % oxygen, and most preferably 99 volume % oxygen. Nitrogen containing blanketing agent" means a gas or liquid containing very low oxygen content and a high nitrogen content. A primarily nitrogen containing blanketing agent contains less than 5 volume % oxygen, preferably less than 1 volume %, and more preferably less than 0.1 volume %. A primarily nitrogen containing blanketing agent contains at least 90 volume % nitrogen, preferably at least 95 volume %, and more preferably at least 98 volume % nitrogen. See paragraph 0034-0035.

O'Rear teaches that the tanks are flushed several times with the nitrogen containing blanketing agent to ensure that the original oxygen environment is purged from the tanks. If the nitrogen containing blanketing agent is supplied to the ship in the form of a compressed gas, or preferably liquid nitrogen, a nitrogen gas can be generated from the compressed gas or liquid nitrogen. See paragraph 0063.

O'Rear teaches that the nitrogen containing blanketing agent from the air separations unit can be used to prevent oxidation of hydrocarbonaceous products, particularly those with low sulfur levels such as Fischer Tropsch products. When a hydrocarbonaceous product, in particular a Fischer Tropsch derived product, is blanketed with the primarily nitrogen containing blanketing agent, the nitrogen containing blanketing agent acts to prevent oxidation of the product and formation of peroxides in the product. Using the primarily nitrogen containing blanketing agent does not increase is the sulfur content of the hydrocarbonaceous product and is an effective

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way to prevent oxidation and *formation of peroxides* without decreasing the value of the product. See paragraph 0064.

O'Rear teaches that the cargo tanks containing the hydrocarbonaceous products is flushed and filled with the primarily nitrogen containing blanketing agent from the air separations unit to reduce the oxygen content of the gas phase *in contact with the product*. Using the primarily nitrogen containing blanketing agent, the oxygen content of the gas phase in contact with the product may be reduced to below eight volume percent in accordance with accepted safety regulations. See paragraph 0066.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Rear (US 2004/0259961).

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Applicant's claimed invention is directed to a process to transport a hydrocarbon product from one location to another location by means of a ship wherein the hydrocarbon product is obtained by: (a) separating air into oxygen and nitrogen; (b) using the oxygen to prepare a mixture of carbon monoxide and hydrogen from a carbonaceous source; (c) using the mixture of carbon monoxide and hydrogen to prepare a liquid or solid hydrocarbon product; wherein the process comprises loading the liquid or solid hydrocarbon product in a ship together with the nitrogen as obtained in step (a).

O'Rear discloses an integrated process for the production and transportation of a hydrocarbonaceous product in a transport vessel containing one or more ballast tanks, one or more cargo tanks, and optionally one or more liquid nitrogen storage tanks. The process comprises obtaining a hydrocarbon asset and separating air into a primarily oxygen containing gas and a primarily nitrogen containing blanketing agent. The primarily oxygen containing gas is reacted with the hydrocarbon asset to form syngas and the syngas is converted into a hydrocarbonaceous product. At least a portion of the hydrocarbonaceous product is transferred into at least one of the cargo tanks and at least a portion of the primarily nitrogen containing blanketing agent is transferred to the transport vessel. At least a portion of the primarily nitrogen containing blanketing agent is used to blanket at least one of the tanks on the vessel. Preferably, the primarily nitrogen containing blanketing agent is used to blanket the cargo tank containing the hydrocarbonaceous product during transportation. Preferably, the process to convert

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the syngas into a hydrocarbonaceous product is either a Fischer Tropsch process or a methanol synthesis process. See paragraph 0017.

O'Rear discloses that oxygen containing gas" means a gas containing at least 90 volume % oxygen, preferably at least 95 volume % oxygen, and most preferably 99 volume % oxygen. Nitrogen containing blanketing agent" means a gas or liquid containing very low oxygen content and a high nitrogen content. A primarily nitrogen containing blanketing agent contains less than 5 volume % oxygen, preferably less than 1 volume %, and more preferably less than 0.1 volume %. A primarily nitrogen containing blanketing agent contains at least 90 volume % nitrogen, preferably at least 95 volume %, and more preferably at least 98 volume % nitrogen. See paragraph 0034-0035.

O'Rear teaches that the tanks are flushed several times with the nitrogen containing blanketing agent to ensure that the original oxygen environment is purged from the tanks. If the nitrogen containing blanketing agent is supplied to the ship in the form of a compressed gas, or preferably liquid nitrogen, a nitrogen gas can be generated from the compressed gas or liquid nitrogen. See paragraph 0063.

O'Rear teaches that the nitrogen containing blanketing agent from the air separations unit can be used to prevent oxidation of hydrocarbonaceous products, particularly those with low sulfur levels such as Fischer Tropsch products. When a hydrocarbonaceous product, in particular a Fischer Tropsch derived product, is blanketed with the primarily nitrogen containing blanketing agent, the nitrogen containing blanketing agent acts to prevent oxidation of the product and formation of

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peroxides in the product. Using the primarily nitrogen containing blanketing agent does not increase is the sulfur content of the hydrocarbonaceous product and is an effective way to prevent oxidation and *formation of peroxides* without decreasing the value of the product. See paragraph 0064.

O'Rear teaches that the cargo tanks containing the hydrocarbonaceous products is flushed and filled with the primarily nitrogen containing blanketing agent from the air separations unit to reduce the oxygen content of the gas phase *in contact with the product*. Using the primarily nitrogen containing blanketing agent, the oxygen content of the gas phase in contact with the product may be reduced to below eight volume percent in accordance with accepted safety regulations. See paragraph 0066.

The difference between O'Rear and the instant claimed invention is that O'Rear does not explicitly disclose adding nitrogen to the hydrocarbon product containers. The examiner notes that however, O'Rear teaches that blanketing cargo tank or containers containing hydrocarbonaceous product is an effective way to prevent oxidation and *formation of peroxides* without decreasing the value of the product. Furthermore, O'Rear teaches that tanks containing the hydrocarbonaceous products is flushed and filled with the primarily nitrogen containing blanketing agent from the air separations unit to reduce the oxygen content of the gas phase *in contact with the product*.

It would therefore would have been obvious to one of ordinary skill in the art at the time the invention was made to add nitrogen to the hydrocarbon product containers, in order to prevent the oxidation of hydrocarbonaceous product and prevent fires and explosions by reducing oxygen content.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jafar Parsa whose telephone number is (571)272-0643. The examiner can normally be reached on 9 a.m.-5:30 p.m. (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jafar Parsa/  
Primary Examiner, Art Unit 1621